

PATENT COOPERATION TREATY

REG'D 25 MAY 2005

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From the
INTERNATIONAL SEARCHING AUTHORITY

To:

28/7

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/000211

International filing date (day/month/year)
12.01.2005

Priority date (day/month/year)
12.01.2004

International Patent Classification (IPC) or both national classification and IPC
A61F2/06

Applicant
ANGIOMED GMBH & CO. MEDIZINTECHNIK KG

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Merté, B

Telephone No. +49 89 2399-2851



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/000211

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:—
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/000211

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-36
	No: Claims	
Inventive step (IS)	Yes: Claims	1-36
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-36
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

V.1 Closest State of the Art:

In the technical field of **MRI compatible implants**, the closest prior art is considered to be represented by document

D2: WO 03/075797 A (ANGIOMED GMBH & CO. MEDIZINTECHNIK KG; BLANK, THIEMO, ARNIM) 18 September 2003 (2003-09-18)

that discloses an implant (**D2: p. 1, first two lines of 2nd §**) comprising electrically-conductive closed loops forming an apertured wall of the implant (**Fig. 2, rn 12A, 12B**) with an interior volume (**p. 8, 1st §**), each of said loops being formed from loop portions providing electrically- conductive current pathways (**claim 1**)

The implant is a tube (**D2: p. 1, second line of 2nd §**), the loops of which are electrically insulated from each other (**claim 1: "reduced electrical conductivity"**).

V.2 Novelty [Article 33(2) PCT]:

The subject-matter of **claim 1** thus differs from prior art in that eddy currents are liable to be induced within the closed loops when subjected to a time-dependent external magnetic field, wherein each of said loops consists of a first current pathway and a second current pathway and said first and second current pathways are arranged such that, regardless of the direction of said external magnetic field, the direction of the eddy current that would be induced by said field in said second current pathway is the **reverse** of the **direction** of the eddy current that would simultaneously be induced by said field in said first current pathway, thereby to **prevent** flow of eddy currents in each of said loops.

The subject-matter of the second independent claim, **claim 35**, differs from prior art in that

each of the closed loops has a periphery of a string of equal area lobes that are within said closed loop, and every one of said lobes has a counterpart lobe located diametrically opposite on the implant tube.

V.3 Inventive Step of Independent Claims [Article 33(3) PCT]:

Though the medical device of document

D1: WO 99/10035 A (IMAGE-GUIDED NEUROLOGICS, INC) 4 March 1999 (1999-03-04)

theoretically would lead to the same effect as that described in **claim 1** when subjected to a time dependent magnetic field. There is, however, no reason for the skilled man to use this implant in such a way, the implant of **D1** being intended for distributing pharmaceuticals via a "custom-made" magnetic field.

The particular form of the implant with the lobes can not be deduced from the known prior art. The subject-matter of **claim 38** must be considered as a particular design of the implant that allows for realising the idea of the opposed eddy currents that sum up to null in order to **avoid artefacts** during **MRI**.

Re Item VI

Certain documents cited

Certain published documents

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 2004/071353	26/08/04	05/02/04	06/02/03

A tubular medical device is described that inhibits distortion of medical resonance images. The rings of the stent are arranged such that current in one ring portion is opposed by current in another ring portion.

Re Item VII

Certain defects in the international application

- The independent claims should be drafted in the two-part format according to **Rule 6.3(b) PCT**, delimited over **D2**.
- All features of the claims should be identified by reference signs placed in parentheses [**Rule 6.2(b) PCT**].

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/EP2005/000211

- The documents **D1** and **D2** should be acknowledged in the description [**Rule 5.1(a)(ii) PCT**].